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DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER QUALITY

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May 18, 2001

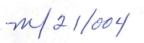
Mr. Gary R. Gamble, Manager Hecla Mining Company 6500 Mineral Drive Coeur d'Alene, Idaho 83815-8788

RE: April 30, 2001 correspondence on 2001 Escalante Silver Mine monitoring results

Dear Mr. Gamble:

This is in regards to the above referenced correspondence in which you transmitted the annual ground water monitoring results required in Settlement Agreement Docket No. UGW92-04. In addition, you also requested a change in the monitoring protocols for the cyanide analysis required by the agreement. The stated basis for the request is the apparent discrepancies of the test results obtained for the cyanide results because of certain interferences with the colorimetric tests procedures. In reviewing the monitoring results and your request, certain issues and questions arose that either need further clarification or consideration on your part. The following comments summarize the results of our review:

- Item No. 2.d of the agreement requires the use of a Utah State Certified laboratory for any analyses performed and reported as part of the agreement. A review of the current list does not show ACZ Laboratories on this list. Please confirm that the laboratory complies with this provision or use the services of a properly certified laboratory in order to be in compliance with the agreement.
- 2. Notes contained on your laboratories data sheets indicate that the retest for free cyanide of the samples was filtered prior to analysis. Please note that the ground water regulations contained in UAC R317-6 in based on a filtered sample. Therefore all sample analyses submitted as a demonstration of compliance should undergo this procedure preferably in the field upon collection. In a review of our files we could not find a copy of your sampling and analysis plan quality assurance \quality control in order to evaluate your monitoring procedures to see if this was being done. It was also not indicated in the data you submitted. In any event it may be that the anomaly of the original test you performed was caused by not filtering the sample. Please submit a copy of your sampling procedures to evaluate.



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- 3. Please note the EPA method M335.3 analysis(equivalent to Standard Methods test 4500 CN E) is a determination of total cyanide rather than the colorimetric free cyanide test as indicated on the lab sheet. It is unclear which laboratory procedure was used for the actual results received. However, this test procedure indicates there is possible interferences from color induced elements, although distillation normally removes this factor. In addition, using either the titrimetric or selective electrode method rather than the colorimetric method also helps reduce interference potential. Therefore you should re-evaluate your laboratory procedures in order that the given water sample characteristics in analyzed by the appropriate method.
- 4. While the Settlement Agreement Condition No. 2.e requires that when there is detectable quantities of total cyanide, a free cyanide analysis must be performed to determine if contamination has occurred. It is our understanding this condition was incorporated to assess compliance with the ground water protection rules. Therefore, it would be our opinion that the proper test procedure to assess this condition would be the use of the EPA method 335.1 for cyanide amenable to chlorination analysis.
- 5. In your correspondence, you ask for consideration to use a WAD cyanide test procedure instead of a free cyanide procedure when there detectable total cyanide. This procedure would not be acceptable primarily because the test process does not detect the more stable cyanide complexes which may be toxic under certain conditions.

Please review the above comments and submit a response with your proposed consideration within thirty days of the date of this letter.

Sincerely,

Larry J. Mize, P.E.

Ground Water Protection Section

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cc: Division of Oil, Gas and Mining

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